

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A method of processing an inductive learning model for a dataset of examples for a charity donation database from which will be selected a subset of individuals to whom to send campaign donation requests, said method comprising:

dividing said charity donation dataset into a plurality of subsets of data;

retrieving a first subset of data of said charity donation database from a memory; and

developing an estimated learning model for an entirety of said charity donation dataset by developing a learning model, using a processor on a computer, for a said first subset of said plurality of subsets; and

developing, using said processor, at least one of a current accuracy and an estimated final accuracy, said current accuracy comprising an accuracy of said learning model for said first subset, said estimated final accuracy comprising an estimated accuracy of said estimated learning model for said entirety of said charity donation dataset.

2. (Currently amended) The method of claim 1, further comprising:

progressively forming an ensemble model of said charity donation dataset by sequentially developing a learning model for each of a successive one of said plurality of subsets, until a desired indication of termination has been reached, thereby an adequate estimated learning model for the entirety of the charity donation dataset has been achieved.

3. (Canceled)

4. (Currently amended) The method of claim 2, further comprising:

developing at least one of a current accuracy and an estimated final accuracy for each successive subset used to progressively form said ensemble model, said current accuracy comprising an accuracy of said learning model for said subset being currently developed, said estimated final accuracy comprising an estimated accuracy of said ensemble model of said charity donation dataset.

5. (Currently amended) The method of claim 2, further comprising:

developing an estimated training time to complete development of said ensemble model if all of said plurality of subsets of data were to be processed.

6. (Currently amended) The method of claim ~~3~~1, wherein each said example in said charity donation dataset carries a benefit and said accuracy comprises an overall accuracy that reflects an estimated total amount of reward from said benefits.

7. (Original) The method of claim 6, wherein said benefit is not equal for all said examples, said learning comprising a cost-sensitive learning, and said accuracy comprises an overall accuracy that reflects an estimated total amount of reward from said benefits in units of money.

8. (Currently amended) An apparatus for processing an inductive learning model for a dataset of examples for a charity donation database from which will be selected a subset of individuals to whom to send campaign donation requests, said apparatus comprising:

Serial No. 10/725,378

Docket No. YOR920030321US1 (YOR.483)

a database divider, executed on a processor, for dividing said charity donation dataset into N subsets of data; and

a base classifier calculator, executed on said processor, for developing a learning model for data in a first subset of said N subsets as an estimated learning model for said charity donation dataset.

9. (Currently amended) The apparatus of claim 8, further comprising:

an ensemble calculator, executed on said processor, for progressively developing an ensemble model of said charity donation database of examples by successively integrating a base classifier from successive subsets of said N subsets.

10. (Currently amended) The apparatus of claim 9, further comprising:

a memory interface to retrieve data from said charity donation database and to store data as said inductive learning model is progressively developed; and

a graphic user interface to allow a user to selectively enter parameters, to control the progressive development of said ensemble model, and to view results of said progressive development.

11. (Currently amended) A system to process an inductive learning model for a dataset of example data from a charity donation dataset, said system comprising one or more of:

a memory containing one or more of a plurality of segments of said example data, wherein each said segment of example data comprises data for calculating a base classifier for an ensemble model of said charity donation dataset;

Serial No. 10/725,378

Docket No. YOR920030321US1 (YOR.483)

a base classifier calculator, as executed by a processor, for developing a learning model for data in one of said N segments;

an ensemble calculator, as executed by said processor, for progressively developing an ensemble model of said charity donation database of examples by successively integrating a base classifier from successive ones of said N segments;

a memory interface to retrieve data from said charity donation database and to store data as said inductive learning model is progressively developed; and

a graphic user interface to allow a user to at least one of enter parameters, to control the progressive development of said ensemble model, and at least one of display and printout results of said progressive development.

12. (Canceled)

13. (Currently amended) A method of deploying computing infrastructure, comprising integrating computer-readable code into a computing system, wherein the code in combination with the computing system is capable of processing an inductive learning model for a dataset of examples for a charity donation database from which will be selected a subset of individuals to whom to send campaign donation requests by:

dividing said dataset into N subsets of data; and

developing an estimated learning model for said charity donation dataset by developing a learning model for a first subset of said N subsets.

14. (Currently amended) A signal-bearing storage medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method of processing an inductive learning model for a dataset of examples from a charity donation database, said method comprising:

dividing said dataset into N subsets of data; ~~and~~

developing an estimated learning model for said charity donation database dataset by
developing a learning model for a first subset of said N subsets; ~~and~~

~~wherein said dataset comprises data for at least one of:~~

~~fraud detection;~~

~~intrusion detection;~~

~~charity donation;~~

~~security and exchange;~~

~~loan approval;~~

~~animation;~~

~~car design;~~

~~homeland security;~~

~~stock trading;~~

~~surveillance; and~~

~~aerial space images~~

developing at least one of a current accuracy and an estimated final accuracy, said current accuracy comprising an accuracy of said learning model for said subset being currently developed, said estimated final accuracy comprising an estimated accuracy of said ensemble model of said dataset.

15. (Previously presented) The signal-bearing storage medium of claim 14, said method further comprising:

progressively forming an ensemble model of said dataset by sequentially developing a learning model for each of a successive one of said N subsets, until a desired indication of termination has been reached.

16. (Canceled)

17. (Previously presented) The signal-bearing storage medium of claim 15, said method further comprising:

developing an estimated training time to complete development of said ensemble model.

18. (Previously presented) The signal-bearing storage medium of claim 16, wherein each said example in said dataset carries a benefit and said accuracy comprises an overall accuracy that reflects an estimated total amount of reward from said benefits.

19. (Previously presented) The signal-bearing storage medium of claim 18, wherein said benefit is not equal for all said examples, said learning comprising a cost-sensitive learning, and said accuracy comprises an overall accuracy that reflects an estimated total amount of reward from said benefits in predetermined units.

20. (Currently amended) A method of at least one of increasing a speed of development of a learning model for a dataset of examples for a charity donation database from which will be

Serial No. 10/725,378

Docket No. YOR920030321US1 (YOR.483)

selected a subset of individuals to whom to send campaign donation requests and increasing an accuracy of said learning model, said method comprising:

dividing said charity donation dataset into N subsets of data; and

developing an estimated learning model, using a processor on a computer, for said charity donation dataset by developing a learning model for a first subset of said N subsets.

21. (Original) The method of claim 20, further comprising:

calculating an estimated accuracy for said learning model.

22. (Original) The method of claim 20, further comprising:

calculating a remaining training time.

23. (Currently amended) The method of claim 20, further comprising:

progressively, and stepwise, forming an ensemble model of said charity donation dataset by sequentially using additional said subsets to develop an additional learning model for said subset and incorporating each said additional learning model into an aggregate model to form said ensemble model, wherein said progressive and stepwise forming can be terminated prior to developing an additional learning model for all of said N subsets.

24. (Original) The method of claim 20, wherein said examples carry potentially different benefits, said method further comprising:

calculating an estimation of an accumulated benefit for said learning model.

25. (Currently amended) A method of developing a predictive model for a charity donation database from which will be selected a subset of individuals to whom to send campaign donation requests, said method comprising:

for a charity donation dataset comprising a plurality of elements, each said element comprising a feature vector, said charity donation dataset further comprising a true class label for at least a portion of said plurality of elements, said true class labels allowing said dataset to be characterized as having a plurality of classes, dividing at least a part of said portion of said plurality of elements having said true class label into N segments of elements; and

learning a model for elements in at least one of said N segments, using a processor on a computer, as an estimate for a model for all of said charity donation dataset.

26. (Original) The method of claim 25, further comprising:

using a second part of said portion of said plurality of elements having said true class label as a validation set for said model.

27. (Original) The method of claim 26, further comprising:

using said validation set to calculate a predicted accuracy for said model.

28. (Original) The method of claim 25, further comprising:

calculating an estimated training time for learning a model based on a remainder of said N segments.

Serial No. 10/725,378

Docket No. YOR920030321US1 (YOR.483)

29. (Original) The method of claim 25, wherein said elements are each associated with a benefit, said method further comprising:

establishing a benefit matrix associated with said plurality of classes, said benefit matrix defining a benefit for each said element in said dataset as applicable for each said class.

30. (Original) The method of claim 29, wherein said elements in said dataset can respectively have different benefit values, said method further comprising:

using a validation dataset to measure a validation of said model; and

calculating an aggregate benefit for said model, as based on said validation dataset.

31. (Original) The method of claim 25, further comprising:

progressively developing an ensemble model by successively learning a model for elements in one of a remaining said N segments, wherein said progressively developing said ensemble model is terminable at any stage.

32. (Original) The method of claim 31, further comprising:

calculating at least one of an accuracy and a remaining training time for said ensemble model.

33. (Original) The method of claim 32, further comprising:

entering a threshold for at least one of said accuracy and said remaining training time; and

automatically terminating said progressively developing said ensemble model whenever said threshold is exceeded.